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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,950	01/25/2006	Bruno Bassi	5784	3574
26936 7590 10/04/2007 SHOEMAKER AND MATTARE, LTD 10 POST OFFICE ROAD - SUITE 110 SILVER SPRING, MD 20910				
			EXAMINER KERN, KEVIN P	
			ART UNIT 1725	PAPER NUMBER
			MAIL DATE 10/04/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/563,950

Applicant(s)

BASSI, BRUNO

Examiner

Kevin P. Kerns

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 28-33, 44-46, and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Voisin (US 3,874,440).

As to claims 28 and 29, Voisin discloses a casting procedure comprising the steps of providing a mold with open risers (18) for feeding the casting and attracting any slag, fumes, and gases in the molten metal, forcing the molten metal into the mold from a furnace (8) situated below, and sealing the top of the mold using a plate (4), which prevents the molten metal from overflowing and which is connected to a vacuum device (col. 3, lines 15-19).

As to claim 30, the upper part of the mold has cores (figure).

As to claim 31, the upper part of the mold using a metal cope (figure).

As to claims 32 and 45, Voisin discloses a casting machine comprising a lower main structure holding a furnace (8), an upper main structure resting on the lower structure, a base plate (6) on the upper structure, a cooled plate (6 and 6a), and a plate holder (7) fastened to the ejector plate (17).

As to claim 33, the cooled plate (6) is fitted with an opening for passage of the ejector plate (figure).

As to claim 44, the main lower structure is removable from the upper structure (figure).

As to claims 46 and 48, the upper plate (4) prevents metal from overflowing.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 41, 42, 49 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voisin (US 3,874,440) in view of Farkas (US 6,499,529).

Voisin discloses a casting apparatus comprising an upper part with a metal cope (4), a lower main structure for holding a furnace, a base plate (6), a cooling plate (6 and 6a), and a plate holder (7). Voisin fails to teach a vacuum chamber communicating with channels on the metal cope and wherein the mold is tiltable.

However, Farkas discloses a rotatable mold having a vacuum chamber connecting to the core (22) and to remove any gas in the die cavity to reduce gas entrapment (col. 4, lines 45-49, col. 7, lines 17-18).

Therefore, it would have been obvious to one of ordinary skill in the art to have a rotatable mold with a vacuum as taught by Farkas, in Voisin, in order to reduce gas entrapment during casting.

5. Claims 34-40, 43, 44, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voisin (US 3,874,440).

Voisin discloses slides which run along the plate holder and slots to receive the slides, two side molds, with one side of the mold made in at least two overlapping parts, and the lower main structure is removable from the upper structure. Voison fails to teach quick lock means and mushrooms moved in the slots to lock the ejector plate and plate holder. Voison also fails to teach sides that are moved by hydraulic cylinders.

However, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have quick lock means, having mushrooms in the slot to lock the two plates, as well as having hydraulic cylinders to move the two sides, since the ejector plates are movable and therefore would need a locking means to hold the ejector plate together. In addition, the side molds would be obvious to use hydraulic cylinders to move, since the metal molds are heavy and hot during and after casting.

Response to Arguments

6. The examiner acknowledges the applicant's amendment received by the USPTO on August 1, 2007. Claims 28-50 remain under consideration in the application.

7. Applicant's arguments filed August 1, 2007 have been fully considered but they are not persuasive.

With regard to the applicant's remarks/arguments on pages 8 and 9 of the amendment, the applicant argues that reference number 18 of Voisin is not an open riser. The examiner respectfully disagrees. As set forth in independent claim 28, the limitation "a mold having open feeding risers for feeding molten metal to the mold" does not distinguish over the Voisin reference. Specifically, Voisin discloses that riser 18 feeds molten metal to the mold, as shown in Figure 1. As understood by the examiner, the applicant is intending to claim an open riser on top of the mold to hold extra molten metal while the cavity is being filled. The open riser is to compensate additional molten metal by gravity feed back to the mold cavity during the solidification and shrinkage of the molten metal in the cavity. The applicant is suggested to amend the claims in view of this interpretation, as such an amendment would overcome the prior art of record.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jonathan Johnson can be reached on (571) 272-1177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin P. Kerns *Kevin Kerns 9/30/07*
Primary Examiner
Art Unit 1725

KPK
kpk

September 30, 2007